

NEW SPECIES AND SUBSPECIES OF ODONATA

By D. E. KIMMINS

FROM time to time, when dealing with small collections of Odonata accessions in the British Museum (Nat. Hist.), isolated new species have been noticed and described. As the collections themselves were not of sufficient interest to warrant separate publication, the descriptions have accumulated and it is now considered desirable to publish them in a short paper, since the specimens are in the Museum collections under manuscript names. Five species and one subspecies are described and notes are given on a previously described species.

Protosticta rufostigma sp. n. (Fam. Platystictidae)

(Text-fig. 1)

S. INDIA: Tinnevely District, Naraikadu, 2,500–3,000 ft., 3–8.ix.1938, G. M. Henry, 1 ♂, 2 ♀.

♂. Head with labium brownish black, labrum light blue, rather broadly bordered with brownish black on anterior margin. Clypeus pale blue, frons glossy blue-black, vertex and occiput rather dull blue-black.

Prothorax greenish white, posterior lobe blackish, this colour extending slightly on to the middle of the mid-lobe. Synthorax greenish black, with a bluish white, oblique stripe on each side to the mid legs and a similar stripe on the posterior part of the metepimeron, extending on to the hind legs. Legs brownish white.

Abdomen blackish brown, marked with yellowish white and with blue as follows: Segment 1, and possibly 2, yellowish white laterally; segment 3 with a narrow, basal annule of yellowish white, divided dorsally with blackish, segments 4–7 with broader, yellowish white annules, only slightly widened laterally, segment 8 with its basal half blue, not extended apically at sides, 9 and 10 black. Anal appendages black (Text-fig. 1B–D); similar in general pattern to *P. davenporti* Fraser, but the superiors with the basal tooth less acute and the thumb-like lobe more slender. Inferiors in dorsal aspect a little stouter.

Wings hyaline, very faintly smoky; pterostigma (Text-fig. 1A) rather large, reddish brown (when viewed against a dark ground there is a narrow surround of whitish pruinescence); 14 postnodals in fore wing, 13 in hind wing; Riv + v arising well distal to subnode.

♀. Head and thorax similar to male. Legs paler, knees and dorsal carinae of femora brown. Wings as in male. Abdomen marked as in male, but with bluish white instead of yellowish white. Segment 7 with basal annule occupying about the basal fourth. Vulvar scale blackish, robust.

Length of abdomen, ♂, 46 mm., ♀, 36 mm.; hind wing, ♂, 23 mm., ♀, 22 mm.

Holotype male, allotype and paratype females in British Museum (Nat. Hist.). This species is closely related to *P. davenporti* Fraser, but may be distinguished by

the larger pterostigma, differences in the pattern of the prothorax and the eighth abdominal segment, and differences in the anal appendages of the male. The pterostigma recalls that of *P. sanguinostigma* Fraser, but the anal appendages of that species are quite distinct.

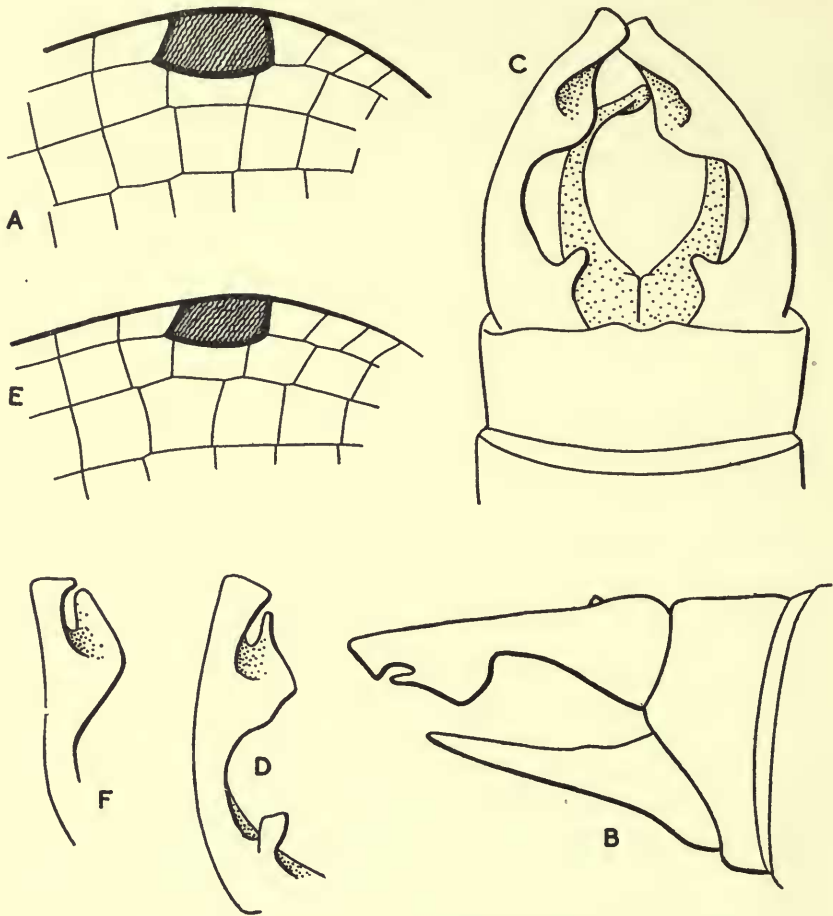


FIG. 1. *Protosticta rufostigma* sp. n. ♂(A-D) and *P. davenporti* Fraser, ♂ (E-F). (A), pterostigma of fore wing; (B), anal appendages, lateral; (C), the same, dorsal; (D), superior appendage from above and within; (E), pterostigma of fore wing; (F), superior appendage from above and within.

Calicnemia nipalica sp. n. (Fam. Platycnemididae)

NEPAL: Phewa Tal, nr. Pokhara, 2,500 ft., 8.v.1954, J. Quinlan (B.M. Nepal Exped.), 10 ♂.

Head with labium dull yellowish; genae olive-green (yellowish when immature), labrum and clypeus shining dark brown; frons and vertex dull black, slightly pruinose (immature with a dull yellowish, transverse band linking the genae just

above the clypeus and another narrow transverse band at the level of the ocelli). With age the outer parts of this band become pruinosed. Postocular spots narrow, yellowish. Antennae black, apices of basal and second segments yellowish.

Prothorax black, slightly pruinosed, a small yellowish spot on each side near base. Mesepisternum black, antehumeral stripes narrow, yellowish when young, becoming pruinosed lilac or blue. Mesepimerum black, pruinosed, with exception of lower angle, which is yellowish. Mesinfraepisternum largely black. Episternum, epimerum and infraepisternum of metathorax largely black when mature, largely yellowish when young, with a black stripe along the posterior margin of episternum and a fuscous cloud over infraepisternum. Venter yellowish, becoming fuscous. Legs black, femora yellowish at extreme bases.

Abdomen with segment 1 yellowish, becoming fuscous; segments 2-6 deep red, faintly pruinosed, 2-5 with a narrow, fuscous, apical ring, 6 with a broader ring, 7-10 black. Anal appendages yellowish, similar in form to *mortoni*, *miniata*, etc.

Wings with black venation and fuscous stigma. Postnodals 18, 19 in fore wing, 17, 16 in hind wing.

Length of abdomen, 23 mm., of hind wing, 24 mm.

Holotype ♂ and paratypes in British Museum (Nat. Hist.). In markings of the body, this species resembles *C. erythromelas* Sélys, but that species has distinctive anal appendages. It differs from *miniata* in the greater degree of black on the head, narrower yellow antehumeral stripes, soon becoming pruinosed and the yellow anal appendages. The similarity in anal appendages of a number of species in this genus makes one wonder whether we are perhaps dealing with subspecies of a widely distributed species, differing chiefly in colour and pattern.

***Pseudagrion guichardi* sp. n.** (Fam. Coenagriidae)

(Text-fig. 2)

ETHIOPIA: Nr. Cencia, 29.iii.1948, K. M. Guichard, 18 ♂; R. Hawash, nr. Moggio, iv.1948, K. M. Guichard, 1 ♂.

Head with labium, labrum and anteclypeus yellowish, postclypeus shining black. Frons dull black, with a narrowly interrupted, transverse, yellow band below the antennae, linking up with the yellowish genae. Postocular spots small, yellowish. Occiput yellowish.

Prothorax black, with a greenish sheen, lateral margins and a small lateral spot yellowish. Synthorax black above, with a greenish sheen, mid-dorsal carina finely yellowish. Antehumeral stripe narrow, yellowish. The black extends laterally beyond the humeral suture. Sides pale yellowish, marked with black as in Text-fig. 2A. Legs blackish, femora narrowly marked with yellowish on anterior surfaces at base, posterior and ventral surfaces yellowish.

Abdomen black above, heavily pruinosed as far as sixth segment, eighth to tenth segments marked with blue dorsally as in Text-fig. 2B. Lower lateral margins of segments bluish or yellowish. Superior anal appendages (Text-figs. 2C, D) blackish brown, inferiors yellowish. Upper branch of superiors with a small basal as well as an apical tooth.

Length of abdomen, 29–33 mm., of hind wing, 23–26 mm.

Holotype ♂ and paratypes in British Museum (Nat. Hist.). This species differs from *Ps. kersteni* (Gerstaecker) in the more robust lower branch of the superior appendages, the presence of a small basal tooth on the inner margin, the pale labrum

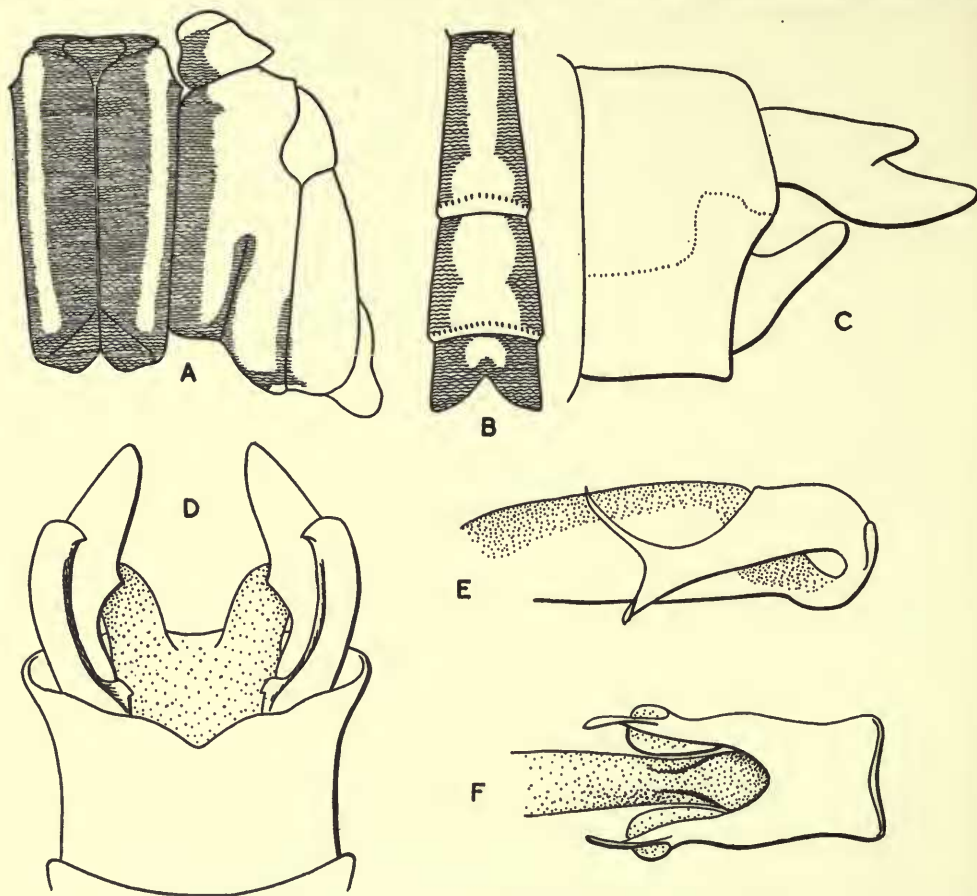


FIG. 2. *Pseudagrion guichardi* sp. n. ♂. (A), diagram of thoracic pattern; (B), pattern of abdominal segments 8–10, dorsal; (C), anal appendages, lateral; (D), the same, dorsal; (E), penis, lateral; (F), the same, ventral.

and in the form of the penis, which resembles that of *epiphonematicum*. In the presence of a basal tooth on the inner margin of the superior appendages it resembles *furcigerum* (Rambur) but it differs in the longer lower branch. From *epiphonematicum* it differs in colouring and in the form of the anal appendages.

***Enallagma somalicum* Longfield (Fam. Coenagriidae)**

ETHIOPIA: Errer, nr. Gota, 23.v.1948, K. M. Guichard, 4 ♂, 1 ♀.

The type specimens of this species are not in very good condition and I am therefore supplementing the original description as regards colour.

Labrum, anteclypeus and frons bluish. Ground colour of prothorax bluish. Dorsum of synthorax black, with blue antehumeral stripes, the latter extending sideways to the humeral suture, bordered externally with a narrow, blackish stripe. First abdominal segment black above, with a tiny blue spot. The median black stripe on the dorsum of the second segment sometimes broken. The number of postnodal cross-veins is variable, the type series showing 7-8 in the fore wing and 6-7 in the hind wing.

Perilestes bispinus sp. n. (Fam. Perilestidae)

(Text-fig. 3)

BRAZIL: Rio Negro, Thomar, ex McLachlan collection, 2 ♂.

Head with labium pale, labrum shining black, anteclypeus pale blue, postclypeus, frons and vertex shining blue-black. Antennal segments fuscous. Back of head metallic greenish black.

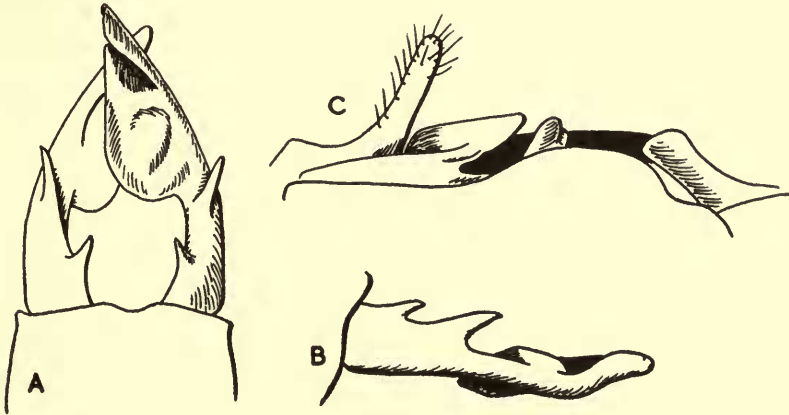


FIG. 3. *Perilestes bispinus* sp. n. ♂. (A), superior anal appendages, dorsal; (B), the same, lateral; (C), accessory genitalia, lateral.

Prothorax pale creamy yellow, anterior margin narrowly fuscous, a fuscous, median, longitudinal band on the median and posterior lobes, broadening posteriorly. Mid-dorsal triangle of mesostigmal lamina fuscous. Mesepisternum chestnut, with a narrow paler line on each side of the dorsal carina. There is a narrow, bluish antehumeral stripe extending along the anterior four-fifths of the humeral suture. Mesepimerum largely chestnut, lower angle pale bluish white. The chestnut stripe of the mesepimerum extends across the upper part of the infraepisternum and continues across the sternum before the second coxae. Metepisternum pale, bluish white, with a narrow brownish stripe along the second lateral suture, across the metinfraepisternum and sternum. Metepimerum pale yellowish. Wings with fuscous veins and dark brown stigma. Legs with coxae yellowish, trochanters and femora pale fuscous, tibiae and tarsi very pale fuscous.

Abdomen with segment 1 pale, apical ring pale fuscous. Segment 2 pale fuscous, darker apically and sides pale yellowish. Segments 3-6 largely pale fuscous, with

a narrow whitish basal ring, a darker fuscous apical ring and a paler subapical ring. Segment 7 medium fuscous, with a pale basal ring. Segments 8-10 fuscous, 9 with a bluish, mid-dorsal, basal triangle. Appendages fuscous.

Wings with 13-14 postnodals in fore wing, 11-12 in hind; Riv + v arising at level of first postnodal; IRiii arising, fore wing at level of eighth postnodal, hind wing at seventh; Riii, fore wing at ninth, hind wing at eighth postnodal; IRii in all wings under outer end of stigma. Apex of 1A about level of origin of Riv + v in fore wing, about half a cell basad in hind wing. Three cells between 1A and margin in fore wing, two in hind wing.

Abdominal segment 2 with anterior lamina divided to its base to make two slender, finger-like processes, curving outward and ventrally, somewhat hairy. Posterior hamules broad, plate-like, in type series bent inwards and overlapping.

Superior anal appendages each with two acute spines arising from the upper margin towards the base, the basal and shorter directed obliquely inwards, the distal longer and directed obliquely outwards. The distal half of the appendage has its inner margin produced inwards and downwards in a large, rounded, sub-triangular lobe, its apex separated from the apex of the appendage by a deep groove. The upper side of the lobe bears some rounded humps. In side view the appendage is slender, its apex sinuously upcurved.

Abdomen, including appendages, 56 mm., hind wing, 21 mm.

Holotype ♂ and paratype ♂ in British Museum (Nat. Hist.). This very slender species runs out in Kennedy's key to the genus *Perilestes* to *gracillimus* and *attenuatus*. From both it differs in the very short 1A in the hind wing (2 cells long), the form of the anal appendages, with the two basal spines and the large inner lobe, and in the ventrally and outwardly curved branches of the anterior lamina.

Ictinogomphus fraseri sp. n. (Fam. Gomphidae)

(Text-figs. 4-6)

SIERRA LEONE: Firiwa, 9.vi.1912, Port Lokko, 3.v.1912, J. J. Simpson, 2 ♂.

Labium bright yellow. Labrum yellowish green, bordered with black and with a median black spot. Clypeus yellowish green with an interrupted, brownish, transverse band. Frons yellowish green, blackish at base, which colour extends forward at the centre to the crest and overlaps on to the vertical face. Vertex blackish, with the elevated points yellowish. Occiput greenish, the posterior margin elevated at its centre in a rounded lobe and margined with blackish.

Thorax brownish with greenish markings as follows: Mesothoracic collar and the antehumeral stripes, which may be confluent with the collar anteriorly and are dilated dorsally; some small spots on the antealar sinus; juxta-humeral stripe clubbed above; three lateral stripes and a small spot at the summit of the metepimerum. Legs blackish, anterior femora yellowish beneath.

Abdomen black, pattern discoloured, probably yellowish or greenish as follows: Segment 1, an apical transverse band; 2 with a narrow pre-apical band linked to a narrow dorsal stripe; laterally the pre-apical band passes obliquely forward over the oreillets. Segments 3-6 each with a triangular mid-dorsal basal spot,

segment 3 also with lateral basal spots and a mid-dorsal pre-apical spot. Segment 7 yellowish, with an apical blackish ring. Segment 8 with a narrow basal ring, 9 with small basal and apical lateral spots, 10 with a lateral spot. Segment 8 with the usual foliation.

Anal appendages mainly blackish but superiors paler in apical two-thirds. Superior appendages more upcurved and relatively shorter than in *regis-alberti*. Inferior upcurved at apex in side view, in ventral view with a U-shaped excision, the arms of the U less tapering than in *regis-alberti*. Accessory genitalia with anterior lamina not strongly projecting in side view. Inner branch of hamule forming a blunt,

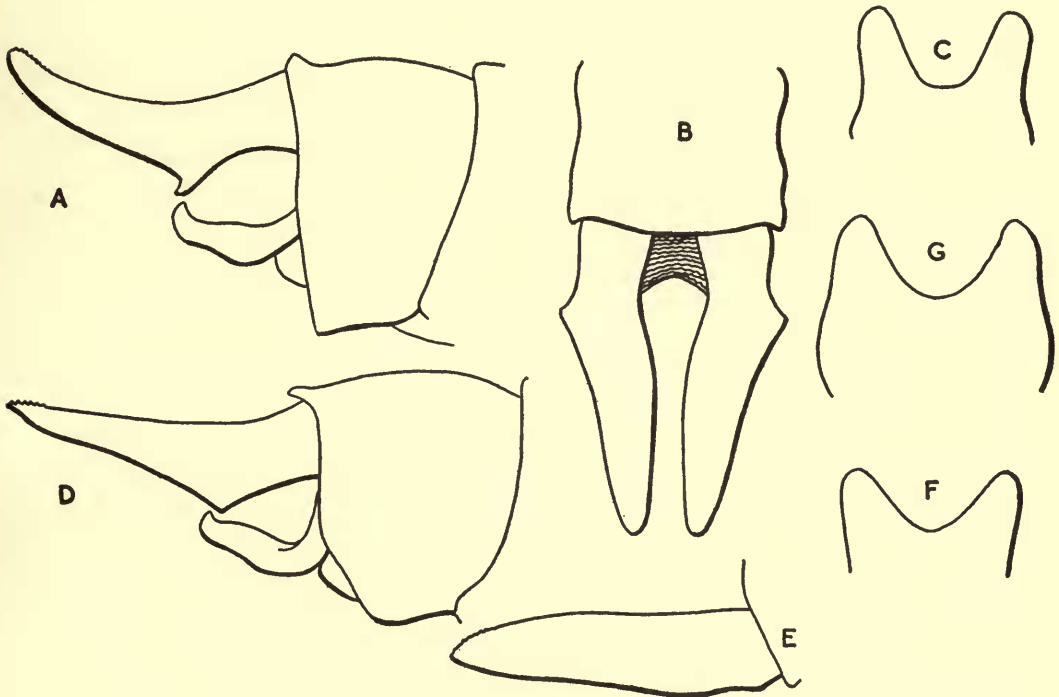


FIG. 4. *Ictinogomphus* spp. ♂. (A-C), *fraseri* sp. n. (A), anal appendages, lateral; (B), the same, dorsal; (C), inferior appendage, ventral; (D-F), *ferox* (Rambur), (D), anal appendages, lateral; (E), right superior appendage, dorsal; (F), inferior appendage, ventral; (G), *regis-alberti* Schouteden, inferior appendage, ventral.

curved finger in ventral view, not blade-like. Outer branch ovate in side view, its inner margin in ventral view not excavated or hooked nor armed with a dense tuft of hairs.

Length of abdomen + appendages, 56 mm., of hind wing, 41 mm.

Holotype ♂ (Port Lokko) and paratype ♂ in British Museum (Nat. Hist.). This species, which I have much pleasure in dedicating to Lt.-Col. F. C. Fraser, M.D., I.M.S., resembles *I. regis-alberti* Schouteden in general appearance and anal appendages. It differs in the large basal marking of the abdominal segments, the more

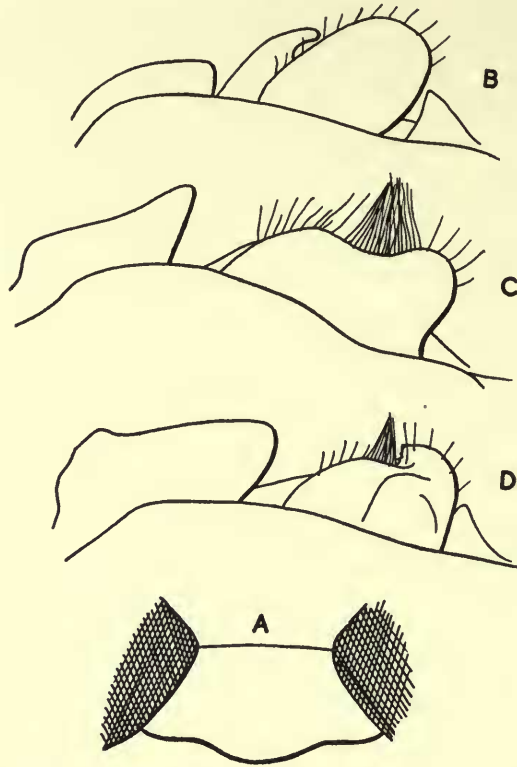


FIG. 5. *Ictinogomphus* spp. ♂. (A-B), *fraseri* sp. n. (A), posterior lobe of occiput, dorsal; (B), accessory genitalia, lateral; (C), the same, *regis-alberti*; (D), the same, *ferox*.

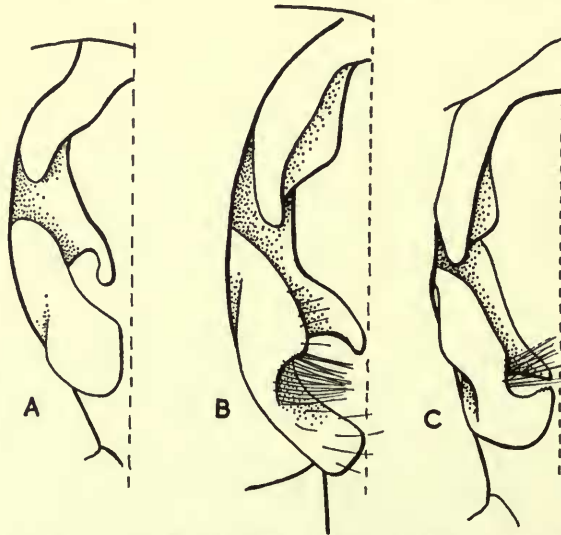


FIG. 6. *Ictinogomphus* spp. ♂ accessory genitalia, ventral. (A), *fraseri* sp. n.; (B), *regis-alberti*; (C), *ferox*.

produced lobe of the occiput, the more upturned superior appendages and especially in the very different accessory genitalia. In *regis-alberti* the inner branch of the hamule is broad and blade-like and the outer branch has a wide shallow excision of its inner surface, and bears a dense tuft of hairs in the excision. *I. ferox* (Rambur) has even more yellow on the abdominal segments and on the femora, straighter superior appendages, which do not project laterally at the level of the ventral tooth and has the outer branch of the hamule even more excised, its apex forming a blackened tooth, and carrying a tuft of hairs.

Atoconeura biordinata aethiopica ssp. n. (Fam. Libellulidae)

(Text-fig. 7)

ETHIOPIA: Segheria, 25.iii.1948, 2 ♂, 2 ♀; Wondo, iv.1948, 1 ♂; Dilla, iv.1948, 1 ♂, K. M. Guichard.

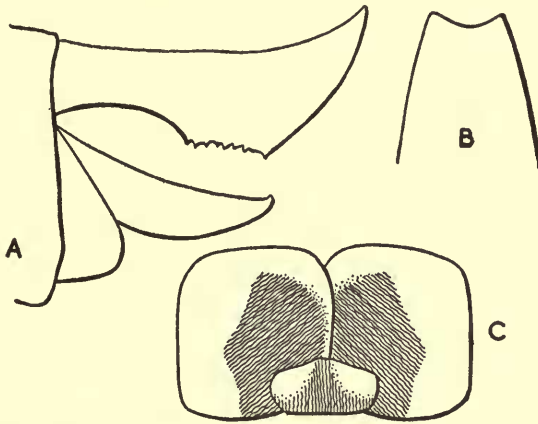


FIG. 7. *Atoconeura biordinata aethiopica* ssp. n. ♂. (A), anal appendages, lateral; (B), inferior appendage, ventral; (C), pattern of labium, ventral.

♂. Labium yellow, with a somewhat pentagonal pattern in black on the lateral lobes, the black pigment not usually reaching the inner margin, median lobe with a blackish basal triangle. Labrum yellow, sometimes with a small blackish spot at centre of the apical margin. Postclypeus and vertical surface of frons whitish, dorsal surface and vertex shining metallic blue, the anterior margin of the metallic colouring almost straight. Sides of frons brownish with a metallic spot.

Dorsum of thorax metallic greenish, slightly obscured by pruinescence, mid-dorsal carina yellowish and there is a yellowish spot on each side before the antealar sinus. Sides of thorax rather discoloured but apparently with the usual yellow and blackish markings. Legs black, posterior surface of anterior femur whitish.

Abdomen almost completely pruinose, pattern obscured, the apical segments less dilated than in other subspecies. Anal appendages much as in *kenya* Longfield, superior appendages perhaps a little stouter.

Wings with 8-10 antenodals in fore wing, 7-8 in hind wing. Triangle of fore wing

divided, a single row of three cells at base of discoidal field, followed by several rows of two cells. Membranule pale grey, with basal third whitish. Pt dark brown.

♀. Labium with the black on the lateral lobes less extensive than in the male. Metallic blue-green on dorsum of frons less extensive. Vertex brownish.

Thorax rather discoloured, dorsum with a slight coppery sheen. Legs blackish, femora marked with whitish on posterior surface of fore legs and on both surfaces of other legs.

Abdomen discoloured, pattern of segments 1-2 obscure. Segments 3-7 yellow from base to transverse carina and with a yellowish band along sides. There are traces of a mid-dorsal, longitudinal, yellowish spot on segment 3 and definite elongate spots on 4-7. Segments 8-9 blackish brown above, with a narrow yellowish lateral stripe. Segment 10 blackish above, with a fine yellowish mid-dorsal line. Ventral segments obscurely yellowish. Cerci black, blunt as in *kenya*, paraprocts shining brownish, sparsely hairy.

Wings slightly smoky, with 9-10 antenodals in fore wing, 7-8 in hind wing. Triangle of fore wing divided, discoidal field beginning with two rows of three cells followed by a number of rows of two cells. Pt dark brown.

Length of abdomen, ♂, 28-30 mm., ♀, 32-33 mm.: hind wing, ♂, 32-34 mm., ♀, 35-36 mm.

Holotype ♂, allotype ♀ (*Segheria*) and paratypes in British Museum (Nat. Hist.). This subspecies is closely allied to *A. biordinata kenya* Longfield but it differs from it in the scarcely dilated apical segments of the abdomen of the male and the different pattern of the labium.

One might question the wisdom of adding yet another subspecies to *Atoconeura biordinata*, but the fact that there were four males from three localities suggested that the differences mentioned above were not merely individual. The males are very distinctive in their general appearance, with the terminal segments of the abdomen only very slightly dilated. Whilst making comparisons with the other subspecies, a discrepancy was noticed in connection with *A. b. kenya*. In her key, Miss Longfield states that the labrum of *kenya* is all yellow, whereas the holotype ♂ has a broad band of black on the labrum and one of the paratypes has the labrum finely margined with black.